ABSTRACT OF THE DISCLOSURE 09/056220

A portable and preferably hand-held X-ray generator for use in intraoral and other X-ray applications, and a new process of dental image acquisition which utilizes a novel receptor holder physically linked to the lightweight, portable generator, and a unique, articulating arm and cradle which allows one generator to be used in multiple operatories. The system's generator has a reduced X-ray output and much smaller focal spot area than conventional dental X-ray generators. This reduced X-ray output reduces the overall patient X-ray burden. The smaller focal spot also allows for improved resolution in the final image.